

Patent Claims

5 1. Method for producing combined puncturing and measuring devices for detection of an analyte in liquid, including a support (1) and a detection element (22), the method comprising the following method steps:

- forming recesses (11) which define puncturing points (16) on one face (9) of the band-shaped support material (1),
- applying a detection element (22) to the band-shaped support material (1), and
- separating individual puncturing/measuring disposable bodies (6) either singly or in groups from the band-shaped support material (1) at separating lines (5; 24, 25).

15 2. Method according to Claim 1, characterized in that depressions (2, 23) are embossed into the band-shaped support material (1) in order to form a channel suitable for capillary liquid transport.

20 3. Method according to Claim 2, characterized in that the depressions (2, 23) are embossed transversely with respect to the direction of advance (39) of the band-shaped support material (1).

25 4. Method according to Claim 2, characterized in that, on both sides of the depressions (2), individual puncturing/measuring disposable bodies (6) are separated in sections from the band-shaped support material (1) along virtual separating lines (5).

5. Method according to Claim 4, characterized in that the virtual separating lines (5) are chosen in accordance with a predetermined, selectable division (12).

6. Method according to Claim 2, characterized in that the depressions (2) in the band-shaped support material (1) are designed with a rounding (34) at the depression bottom (4).

5 7. Method according to Claim 2, characterized in that the depressions (2) in the band-shaped support material (1) are designed with a depression base (4) which has a triangular contour (35).

10 8. Method according to Claim 1, characterized in that the recesses (11) on the first face (9) are punched out or cut out from the band-shaped support material (1), with first and second edges (14; 15) being formed.

15 9. Method according to Claim 1, characterized in that the recesses (11) on the first face (9) of the band-shaped support material (1) are produced so as to be symmetrical with respect to the separating lines (5).

10. Method according to Claim 8, characterized in that the first and second edges (14, 15) of the recesses (11) defining the puncturing points (16) are ground.

20 11. Method according to Claim 1, characterized in that the puncturing points (16) formed on the first face (9) of the band-shaped support material (1) are provided with a soft plastic cover (18) covering them.

25 12. Method according to Claim 2, characterized in that a coating (21) covering the depressions (2) and the material containing the detection element (22) are applied to the band-shaped support material (1) in one work step.

30 13. Method according to Claims 2 and 11, characterized in that the coating (21) covering the depressions (2) and the material containing the detection element (22) are applied to the band-shaped support material (1) one after the other.

14. Method according to Claim 1, characterized in that individual puncturing/measuring disposable bodies (6) are separated singly or in groups from the band-shaped support material (1) transversely with respect to the direction of advance (39) along the separating lines (5).

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15. Method according to Claim 14, characterized in that, in the case of individual puncturing/ measuring disposable bodies (6) being separated from the band-shaped support material (1) in groups along the separating lines (5), perforations are formed to make handling easier.

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16. Method according to Claims 6 or 7, characterized in that the depression base (4) of the depressions (2) is provided with a hydrophilic coating which improves the wetting behaviour of a liquid reservoir (32).

15 17. Method according to Claim 1, characterized in that a material containing the detection element (22) is applied to the band-shaped support material (1) near the puncturing point (16).

20 18. Method for producing combined puncturing and measuring devices for detection of an analyte in liquid, including a support (1) and a detection element (22), the method comprising the following method steps:

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- forming puncturing points (16) on a band-shaped support material (1),
- sealing the puncturing points (16),
- sterilizing the puncturing points (16) and/or the band-shaped support material (1), and
- applying a detection element (22) to the band-shaped support material (1).

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19. Combined puncturing and measuring device for detection of an analyte in liquid, produced in particular according to one or more of Claims 1 to 18, characterized in that individual puncturing/measuring disposable bodies (6) have a puncturing point (16) which is provided with a soft plastic cover (18) and comprise a detection

element (22) which is applied to the individual puncturing/measuring disposable body (6) after the latter has been sterilized and/or sealed.

20. Combined puncturing and measuring device according to Claim 19, characterized in that the detection element (22) is applied to a channel which has been embossed as a depression (2, 23) in the individual puncturing/measuring disposable body (6) and which is suitable for capillary liquid transport.